

GLOBALIZATION AND GLOBAL CRISES: ISRAEL AND THE REST
OF THE WORLD

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Abstract

The pandemic-induced slump in economic activity is deep, as consumer spending, investment spending, and export demand tumble. Central banks, tied down by near-zero interest rates, are resorting to semi-fiscal expansionary policies. The stabilization burden is falling on fiscal policy. The forces of economic globalization are facing headwinds in the form of global crises—first “The Great Recession” and then the “The Pandemic Recession”. At the same time, however, globalization in Israel is spreading, both in terms of international trade and in terms of financial integration into the rest of the world.

INTRODUCTION

Global international trade increased rapidly after 1990, fuelled by the growth of a complex network of global value chains. Yet since the Global Financial Crisis, trade globalization has reversed course. The new trend is expected to persist after the Global Pandemic Crisis. There are no indications that the trend of financial globalization is decreasing, except for a short-term reversal during the Global Financial Crisis. However, when it comes to its trade with the rest of world, Israel uniquely exhibits no discernible trend associated with the recent global crises.

The benefits of globalization have long been recognized in the field of Economics. In his 1919 book, “The Economic Consequences of the Peace”, John Maynard Keynes described the open borders of the then-bygone first age of globalization before WWI. He writes: “The inhabitant of London could order by telephone, sipping his morning tea in bed, the various products of the whole earth, in such quantity as he might see fit, and reasonably expect their early delivery on his doorstep, he could at the same moment and by the same means adventure his wealth in the natural resources and new enterprises of any quarter of the world, [and] *he could secure forthwith, if he wished it, cheap and comfortable means of transit to any country or climate without passport or other formality.*”

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Globalization did reverse its course during the interwar period. World War I produced prolonged economic dislocation, which included Russia's withdrawal from world trade following the Communist Revolution in 1917, the Spanish flu pandemic in 1918 and 1919, monetary instability in the early 1920s, new immigration restrictions, the Great Depression starting in 1929, and the institution of severely protectionist policies in the 1930s. A century later, the world faces a new global health crisis in the form of the COVID-19 pandemic. Health concerns are providing new rationales for protectionism, especially for international travel, medical gear and food, and a renewed emphasis on domestic sourcing.

Global value supply chains are highly vulnerable to pandemics because they are geographically widespread. They are also sensitive to politically rooted trade conflicts. Even prior to the COVID-19 pandemic, trade globalization was challenged by a rising wave of populism spurred on by economic discontent in Europe, the United States, Latin America, and elsewhere, and a trade war between the US and China.

This paper is organized as follows. Section 1 addresses global crises, including the Global Pandemic Crisis. Section 2 discusses recent trends in financial globalization. Section 3 analyzes the recent slowing growth trend of worldwide globalization, mostly trade globalization. Section 4 analyzes trends in Israel's globalization. Section 5 describes Israel's new export markets and analyzes Israel's reorientation toward the new markets. Israel's trade-globalization trends are discussed in Section 6. Israel's financial globalization is discussed in Section 7, and Section 8 concludes.

1. THE SLOWDOWN OF WORLDWIDE GLOBALIZATION

The backlash against trade globalization is not restricted to the Global Pandemic Crisis. International trade increased rapidly after 1990, fuelled by the growth of a complex network of global value chains (GVCs). These chains represent the process of ever-finer specialization and geographic fragmentation of production. Generally speaking, the higher the participation in intraregional value chains, the higher the degree of regional economic integration. Likewise, the higher the degree of participation in interregional GVCs, the higher the degree of economic integration into the global economy. In the wake of the 2008 Global Financial Crisis, uncertainty in the global economy led many firms to reassess their business models. Rather than relying on global supply chains, an increasing number of firms invested in robots, which prompted a renaissance of manufacturing in industrialized countries. Global value chains could now be reshuffled or reduced, localized or regionalized. It is now an open question whether globalization will persist in the wake of the Global Pandemic Crisis

generated by COVID-19.² A short period of economic recession seems unavoidable, but the question is whether these crises will structurally transform globalization in the long term.³

The pandemic-induced slump in economic activity is deep. Consumer spending, investment spending, and export demand have tumbled. Central banks are tied down by near-zero interest rates and have thus lost their most effective stabilization instrument. Consequently, the burden has fallen on fiscal policy. The start of the pandemic disrupted supply chains and production, but the bigger impact was on the demand side. The desire to invest plunged, as people throughout the advanced economies chose to save much of their income.

Longer term there is a risk that younger students from poorer backgrounds will struggle to catch up after an extended period out of school due to lockdowns and other disruptions. Education disruptions due to the pandemic distort children's development trajectory, degrade social mobility, diminish productivity, and breed inequality.

a. Global crises

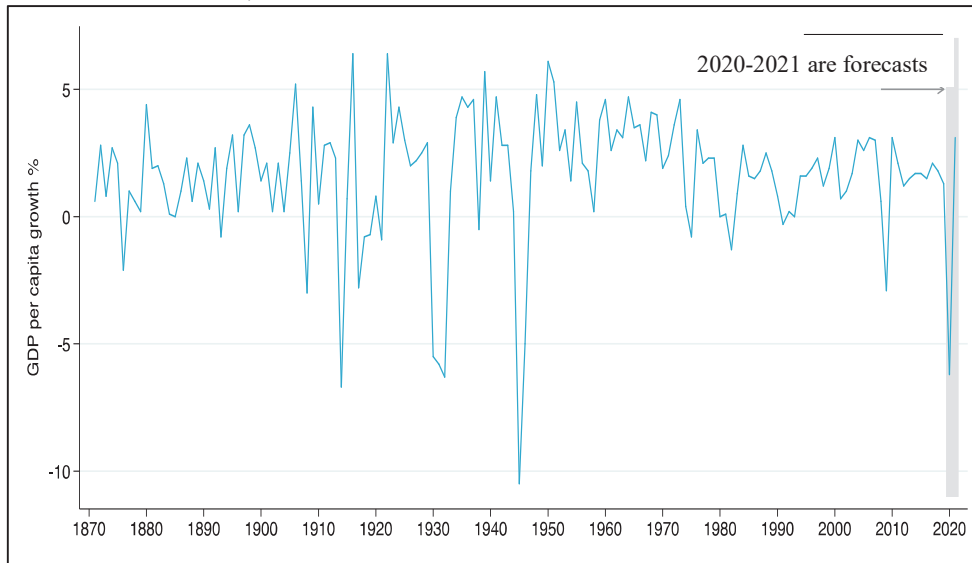
In their survey of centuries' worth of crises, Carmen Reinhart and Kenneth Rogoff (2014) discovered startling qualitative and quantitative parallels across a number of standard financial crisis indicators in 18 postwar banking crises. They found that, on average, banking crises were protracted (output declining for two years); asset prices fell steeply, with home prices plunging 35 percent on average and equity prices declining by 55 percent over 3.5 years; unemployment increased by 7 percentage points over four years; and output fell by 9 percent.⁴

² COVID-19 is part of a pattern of increasingly frequent epidemics that have coincided with globalization, urbanization, and climate change. So far in the 21st century, there have been three major pandemics: the 2002–04 SARS outbreak, the 2009 swine flu pandemic, and the COVID-19 pandemic.

³ Pol Antras (2020) evaluates the extent to which the global economy has entered a phase of deglobalization, and offers some speculative thoughts on the future of global value chains in the post-COVID-19 age. Although the growth of international trade flows relative to that of GDP has slowed since the Great Recession, this paper finds evidence indicating that the global economy has already entered an era of deglobalization. Instead, the observed slowdown in globalization is a natural progression from the unsustainable increase in globalization experienced in the late 1980s, 1990s, and early 2000s.

⁴ See Razin (2014, 2021).

Figure 1
Global Growth Rates, 1871–2020



Source: World Bank (2020), Global Economic Prospects.

Figure 1 indicates that since 1870, the global economy has experienced 14 global recessions. Current projections suggest that the current COVID-19 recession will be the fourth deepest, and the most severe since the end of World War II.

There is a major difference between the 2008 Global Financial Crisis (GFC) and the 2020 Global Pandemic Crisis (GPC). The GFC was the result of an overhang of bad debt that suppressed aggregate demand, whereas during the GPC, consumers and corporations held off spending temporarily, improving their balance sheets.

b. Global crises: Theory

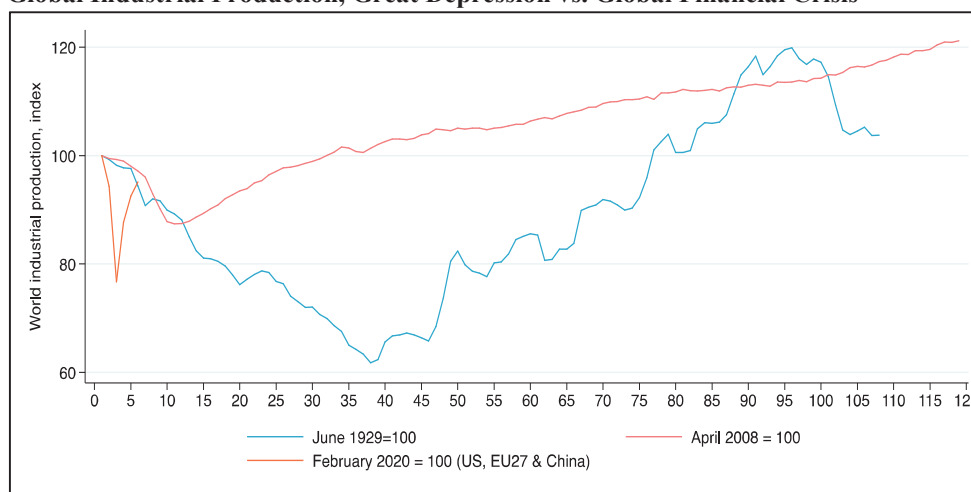
Guerrieri et al. (2020) demonstrate that, in a general equilibrium setting, a supply shock, such as COVID-19, can trigger changes in aggregate demand that are greater than the shock itself. This is possible when supply shocks are concentrated in certain sectors, as they are during a shutdown in response to a pandemic. The fact that some goods are no longer available makes it less attractive to spend overall. One interpretation is that the shutdown increases the shadow price of the goods in the affected sectors, making total current consumption more expensive and thus discouraging it. In contrast, the unavailability of goods in some sectors can shift spending toward the other sectors, through a substitution channel. Whether or not full employment is maintained in the sectors not directly affected by the shutdown depends on the relative strength of these two effects. A supply shock in sector 1 can spill over into a demand shortage in sector 2 that is amplified by incomplete markets.

Guerrieri et al. (2020) then turn to borrowing-constrained consumers and show that the condition for a contraction in employment in unaffected sectors becomes less stringent. Intuitively, if workers in the affected sectors lose their jobs and income, their consumption drops significantly if they are credit-constrained and have a high marginal propensity to consume (MPC). To make up for this, workers in the unaffected sectors would have to increase their consumption of the remaining goods sufficiently. This requires a high degree of substitution across sectors. If goods are not too close substitutes, aggregate demand contracts more than supply and employment in the unaffected sectors falls. Regarding consumption spending, Kozlowski et al. (2020) observe that although there may be an initial “catch-up” surge of consumer spending in advanced economies with the emergence of a vaccine, consumers are likely to save more, in the longer term.

In addition to its direct impact on investment and hiring, the pandemic will likely impose longer-term productivity costs. By the time the pandemic is over, a generation of children, particularly those from lower-income households, will in effect have lost a significant period of their schooling. Young adults who struggle to find their first job in the labor market can expect to earn less in the future than they might otherwise have done. In these aspects, health-triggered crises are different from financially sourced crises.

Figure 2 displays the index of global industrial production during the months following the onset of three crises (October 1929 for the Great Depression (GD), April 2008 for the Global Financial Crisis (GFC), and March 2020 for the Global Pandemic Crisis (GPC)).

Figure 2
Global Industrial Production, Great Depression vs. Global Financial Crisis



Source: Updated dataset of Eichengreen and O’Rourke (2010). Recent data for US and EU are taken from the OECD (2020), and Chinese data are taken from the National Bureau of Statistics of China (press release, August 2020). Indices are weighted by 2019 real GDP (in PPP terms) from the OECD.

The Global Financial Crisis had some similarities with the Great Depression. Eichengreen and O'Rourke (2010) observed that the downturns during the two financial crises were initially very similar. The first year of the 2008–09 slump in industrial production was fully comparable to the first year of the great global slump from 1929 to 1933. It appears that in both cases the trigger was a credit crunch following a sudden burst of asset-price and credit bubbles. However, differences in financial institution and policy reactions (monetary, fiscal, and regulatory) may explain the divergence of tracks after the initial stages. Global industrial production began to recover much earlier in the Great Recession than in the Great Depression. Periods of depressed output were significantly shorter in the former than in the latter, due to different policy reactions and improved financial and budgetary institutional responses. The divergence between the two global crises occurred after about ten months. During the Great Recession, there was a relatively quick recovery after ten months. Such a recovery did not occur during the Great Depression, when the downturn would continue for another 25 months before the recovery set in. As indicated, the fundamental reason for the sharp contrast between these two crises, in terms of recovery periods, was the different reactions of monetary and fiscal authorities.

The Global Pandemic Crisis is not caused by failures of the financial system as was the case regarding GD and GFC. It is caused by the pandemic shock that required the lockdown of productive sectors of the economy.

In comparing the 2008 Global Financial Crisis (GFC) to the 2020 Global Pandemic Crisis (GPC) there are a few key differences.

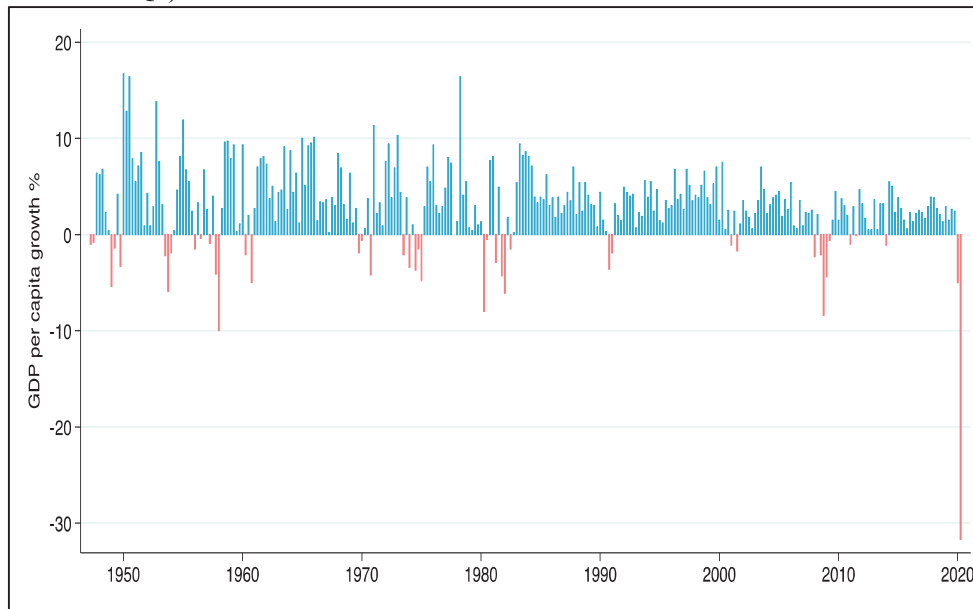
Origin of crisis. The shock that started the GFC was internal to the economy. The crisis originated from the malfunctioning of the economy's financial system. In contrast, the shock that started and prolonged the GPC was external to the economy. Epidemiological forces are driving the crisis.

Magnitude of the initial shock. Quantitatively, the first quarter since the inception of the crisis featured declines in employment and output that are greater in the GPC than during the GFC case.

Length of recovery. The recovery period from the GPC, once large segments of the population are inoculated against COVID-19, is expected to be quick. In contrast, the recovery period from the GFC was protracted.

c. Real-time disaster relief and recovery stimulus

Figure 3
US Gross Domestic Product: Percentage Change from Previous Quarter
1950–2020:Q2)

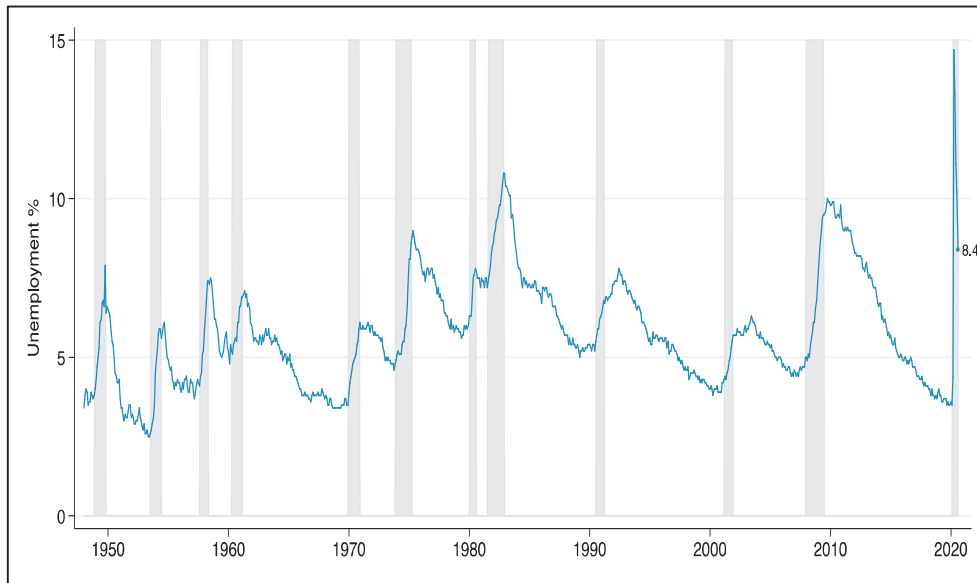


Source: US Bureau of Economic Analysis (2020).

Figure 3 shows that the magnitude of the initial shock during the pandemic crisis was the most severe of all post-WWII downturns of US output.

Pandemic lockdowns brought the unemployment rate to an historical high (see Figure 4). Exiting the lockdown, US jobs grew by 4.8 million in June 2020. It was the second month of strong job gains after the huge losses during the lockdown, when businesses laid off or furloughed tens of millions of workers as the pandemic put a large swath of economic activity on ice.

Figure 4
US Unemployment Rate Since 1948



Source: Bureau of Labor Statistics and Federal Reserve economic data. Unemployment rates are seasonally adjusted.

The disparities in US unemployment across different demographic groups during the 2020 pandemic are significant. The largest employment declines during the pandemic to date are among Hispanics, younger workers, and workers who have a high school diploma or some college education but have not completed a college degree.

Social distancing is more difficult for workers in the services sector, and unemployment rates are higher for some service sector occupations such as food services and travel. Workers in jobs where face-to-face interactions are difficult to avoid are significantly more likely to have been unemployed.

The US employment rebound came in part due to more than \$500 billion in federal aid to small businesses offered on condition that workers be retained, under the one-off Paycheck Protection Program. The “keep-heads-above-water” policy response has been massive and quick among advanced economies. The European style is trying to preserve firms and workers in their current jobs, while the US version is to try to address it as a natural catastrophe and try to subsidize people but allow higher unemployment. In the US, Cares Act legislation was aimed at providing relief for individuals and businesses that have been negatively impacted by the COVID-19 outbreak. The CARES program⁵ included:

⁵ The second-largest federal stimulus package was implemented in early 2021, after the largest was implemented in 2020.

Direct payments: Americans who pay taxes will receive a one-time direct deposit of up to \$1,200, and married couples will receive \$2,400, plus an additional \$500 per child. The payments will be available for incomes up to \$75,000 for individuals and \$150,000 for married couples.

Unemployment: The program provides \$250 billion for an extended unemployment insurance program, expands eligibility, and offers workers an additional \$600 per week for four months, on top of what state programs pay. It also extends UI benefits through Dec. 31 for eligible workers. The program applies to the self-employed, independent contractors and gig economy workers.

Payroll taxes: The measure allows employers to delay the payment of their portion of 2020 payroll taxes until 2021 and 2022.

Use of retirement funds: The bill waives the 10 percent early withdrawal penalty for distributions up to \$100,000 for COVID-related purposes, retroactive to Jan. 1, 2020. Withdrawals are still taxed, but taxes are spread over three years, or the taxpayer has the three-year period to roll it back over.

The Federal Reserve, which had cut interest rates to near zero, had rolled out a 2008-type menu of emergency loan programs, while teaming up with the Treasury Department on programs to support lending to small and medium businesses, and to buy corporate debt. That is, the Federal Reserve took on a semi-fiscal expansionary policy.⁶

The Paycheck Protection Program (PPP) offered small businesses loans that can be converted into grants if they are used to maintain payroll. The US Bureau of Labor Statistics (May 2020 report) shows a partial bounce back of contact-intensive sectors like restaurants and dentists' offices that were largely shut down by social distancing. Many job maintenance and firm relief measures were implemented during the lockdown. Tax deadlines were pushed back in both the EU and the US. Many US states waived the one-week 'waiting period' before receiving unemployment benefits, as well as the job search requirement. They expanded eligibility to include those who need to stay at home to take care of either a child (due to daycare and school closures) or other dependent who may be sick/quarantined, and those who are themselves sick or quarantined.

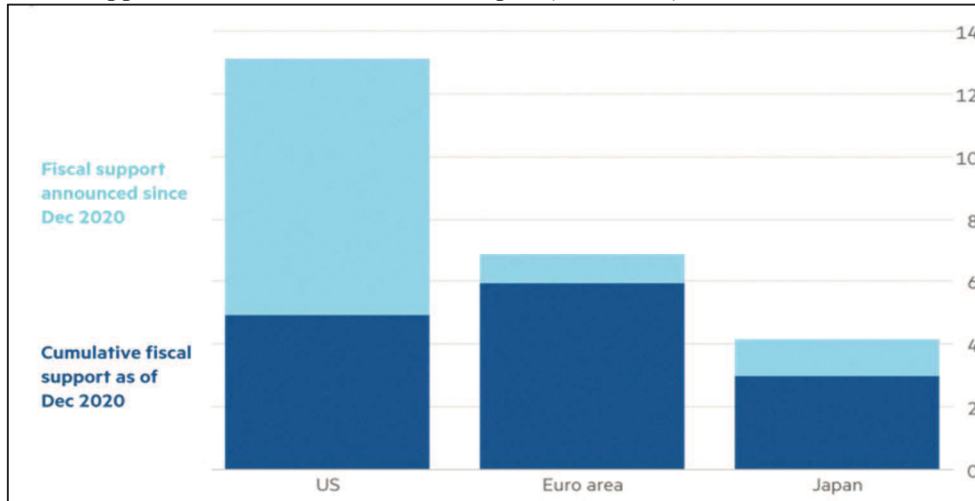
The UK government also instituted government-backed subsidized loans to help small businesses weather the storm. The French government has extended its 'chômage partiel' (temporary unemployment) program, effectively covering 85 percent of wages. The centerpiece of Germany's disaster-relief stimulus package included a three percentage point reduction in value added tax, valid from June 2020 until the end of 2020. In addition, the coalition partners signed off on a €50 billion "future package" of investment, with a focus on the transition to a greener economy and research in areas such as artificial intelligence and quantum computing. Huge sums will be spent on expanding Germany's electric vehicle charging infrastructure. Since the VAT is equivalent to a tax on wages plus a tax on wealth,

⁶ Rui, Esteves, and Sussman (2020) discuss the Bank of Israel's policy crisis response (liquidity provision), and whether it helped maintain financial integration.

the cut in VAT boosts consumption spending and provides an incentive to work. It also has an intertemporal stimulating effect. The government changes VAT rates to create a future path of increasing sales tax revenues and hence stimulate inflation expectations.

US fiscal expansion to help the recovery is massive. President Biden's \$1.9 trillion 2021 stimulus bill takes the amount of pandemic-related spending passed since December 2020 to nearly \$3 trillion (14 percent of pre-crisis GDP), and the total paid out since the start of the crisis in early 2020 to about \$6 trillion.

Figure 5
Fiscal Support in the US, Eurozone, and Japan (% of GDP)



Source: OECD Database.

Figure 5 demonstrates the big relief packages among the major groups of advanced economies. The fiscal union in the US federal system, with the greater risk-sharing this entails, is significantly different than the eurozone, where national fiscal policies are not coordinated.⁷

⁷ Razin and Sadka (2021) demonstrate that federal governance matters. Policy coordination allows a federally organized economic union to exercise monopsony power over migrants more powerfully than a loose federal system. In-migration volumes under the policy-competition regime of a federal system therefore exceed those under the policy-coordination regime. We develop a model demonstrating that with loose federal governance, competition over low-skilled migrants, who come with no capital, induces the individual member state to increase the provision of social benefits, in order to attract more migrants, compared to a coordination equilibrium. As a result, social benefits provided by member states must also

d. Real-time evidence

Chetty et al. (2020) use daily credit card data to provide real-time evidence on impacts of the COVID-19 Pandemic.⁸ They find that in the first few months of the pandemic, spending declined much more among the rich than among the poor (top 25 vs. bottom 25 percentiles), and the bulk of the decline was due to a drop in spending on in-person services. This indicates that there was not necessarily a decline in purchasing power. Rather, the decline was related to fears of the virus. Business revenue dropped more severely in high-income areas. The authors' interpretation is that this is a supply shock, not a lack of purchasing power.

CARES Act stimulus increased spending, but did not fill the hole created by the pandemic shock. Stimulus checks did increase spending among low-income Americans, but the vast majority of the increase in spending was on durable goods, not in-person services. For stimulus to have an impact on employment in the short term, people would have to switch jobs or move.

The PPP had limited impact on employment. The authors suggest that businesses that took the loans did not expect to lay off workers to begin with.

This shock to employment and inequality may have long-lasting effects that require policy interventions. Seventy percent of low-income workers who had jobs in wealthy parts of Manhattan lost their jobs. Chetty cites evidence from past studies of the Great Recession that people do not often move in search of new jobs, suggesting policy intervention may be required. Further, there are potentially big implications for inequality. For example, low-income students are doing far fewer math exercises than their higher-income peers on commonly used apps are.

be increased to keep these migrants within their own economy. Excessively high income redistribution is a reflection of a negative fiscal externality.

⁸ Economists often use household survey data to study the effects of shocks, but these data—while important—have limitations, in that they have time lags and low frequencies, and cannot be disaggregated.

2. FINANCIAL GLOBALIZATION

Full international financial integration requires that in the long run (when prices adjust to various shocks and markets clear), the following arbitrage equation holds:

$$1 + r_t^{US} = (1 + r_t^i) \frac{q_{i/US,t+1}}{q_{i/US,t}},$$

where i stands for Israel, Canada, Germany, and the United Kingdom; and q stands for the real exchange rate against the US dollar⁹:

$$q_{i/US,t}^t = E_{i/US,t} \frac{P_{US,t}}{P_{i,t}},$$

In addition, E stands for the nominal exchange rate against the US dollar; and P stands for the price level.

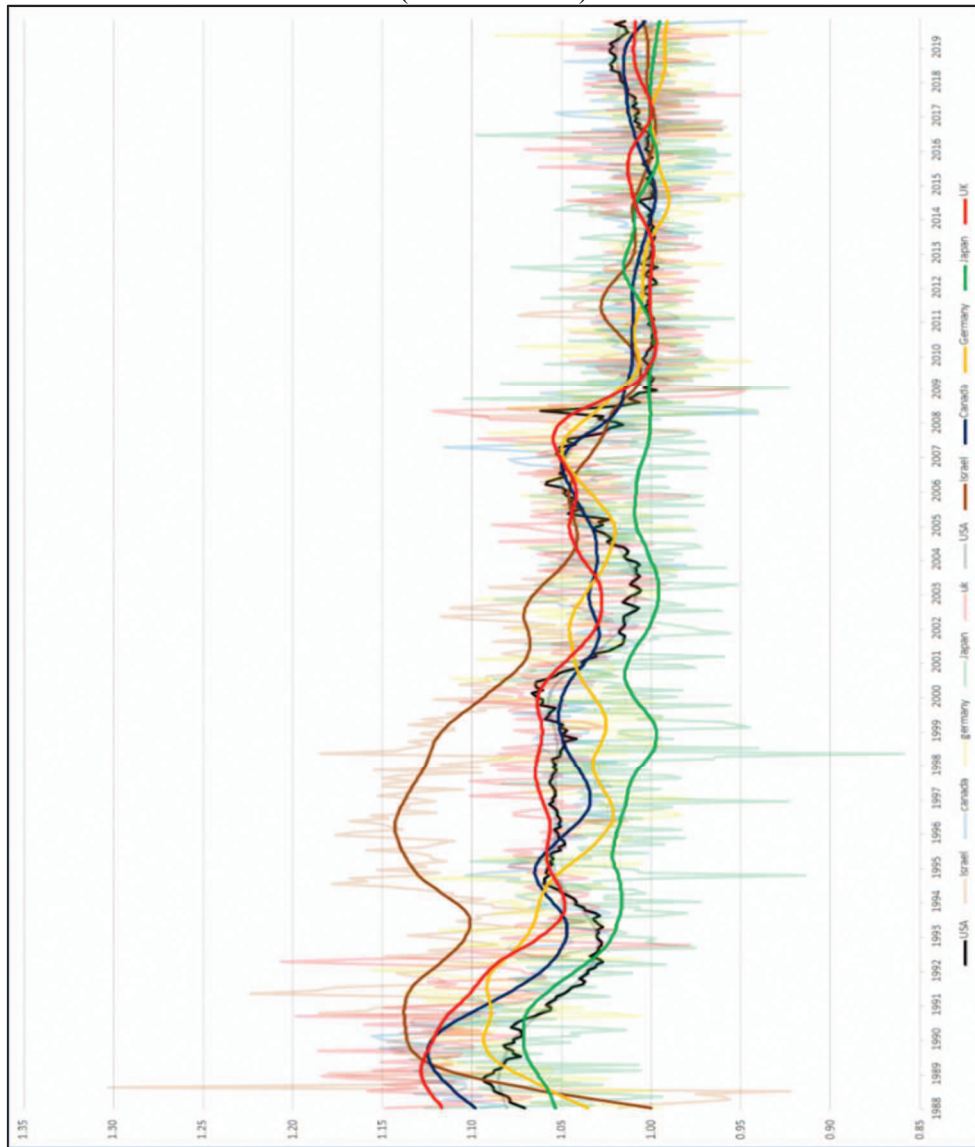
This measure of financial integration is the proximity of the country's real interest rate (adjusted for the real exchange rate's evolution from the present into the next period) to the global safe asset rate of return under perfect international arbitrage.

Figure 6 plots the graphs of the real interest rate, adjusted for changes in the real exchange rate, the yields on three-month government bonds for Israel, Canada, Germany, and the United Kingdom, and the yields on three-month US Treasury bonds. International financial integration generates more synchronized country-specific yields. Time series are filtered to wash out short-term idiosyncratic fluctuations. This figure demonstrates strikingly that in the 1990s, Israel integrated sufficiently into the world capital market, while convergence occurred at the beginning of the 2000s.

⁹ By the Fisher equation:

$$1 + r_t^{US} = (1 + i_{US}^t) \frac{P_{US,t}}{P_{US,t+1}}, \text{ That is, } (1 + r_t^i) \frac{q_{i/US,t+1}}{q_{i/US,t}} = (1 + i_i^t) \frac{P_{i,t}}{P_{i,t+1}} \frac{q_{i/US,t+1}}{q_{i/US,t}}.$$

Figure 6
Gross Real Interest Rate Adjusted for Changes in the Real Exchange Rate
(US benchmark)

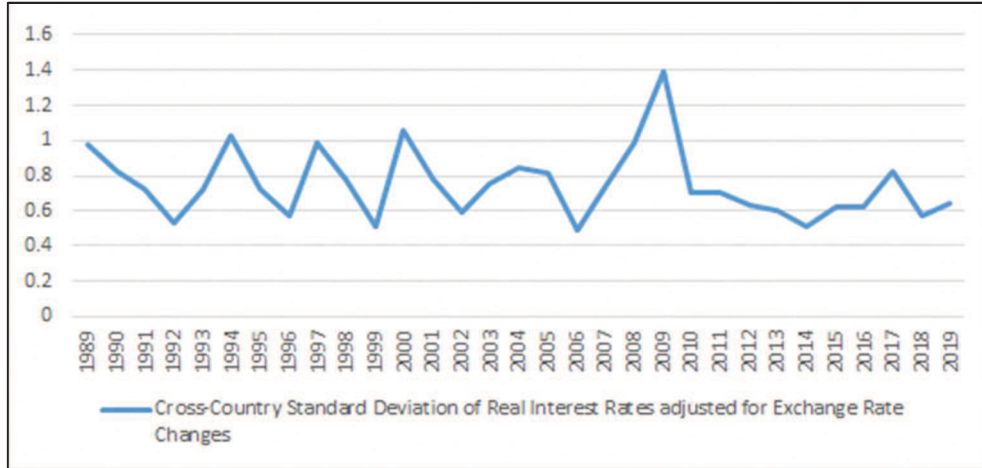


Note: Series are HP-filtered. Monthly data are shown in the background.

Source: Stats Bureau, FRED, World Bank.

The cross-country dispersion measure, shown in Figure 7, describes a downward trend, except for a short-term blip during the Great Financial Crisis.¹⁰

Figure 7
Cross-country Standard Deviation of Real Interest Rates adjusted for Exchange Rate Changes



Source: Stats Bureau, FRED, World Bank.

3. TRADE GLOBALIZATION

Antras (2020) provides systematic evidence indicating that the global economy has already entered an era of deglobalization. He argues that the recent slowdown in globalization is a natural progression from the unsustainable increase in globalization experienced in the late 1980s, 1990s, and early 2000s.¹¹ The ICT revolution has made a great unbundling of production chains possible, and large wage global differentials have made doing so profitable. This generated a vast new quantity of ‘supply chain trade’. Greater international

¹⁰ See also the analysis of the COVID-19 crisis’s short-term effects on financial globalization in Mohsin et al. (2020).

¹¹ “Just-in-time production lines heedless of state borders promised likewise an unmatched recipe for prosperity. ... The vaccine nationalism unleashed by the pandemic has underscored what has been a decade-long retreat from the old shared assumptions about the benefits of borderless supply chains. ... Companies want efficiency and economies of scale while policymakers now prioritize local control of, and access to, critical supplies.” Philip Stephens (Financial Times, March 16, 2021). See also Baldwin and Tomiura (2020).

economic interconnectedness over recent decades has been changing inflation dynamics.¹² The expansion of global value chains (GVCs), i.e., cross-border trade in intermediate goods and services, is an important channel through which global economic slack influences domestic inflation.¹³ As GVCs expand, direct and indirect competition among economies increases, making domestic inflation more sensitive to the global output gap. This can affect the tradeoffs that central banks face when managing inflation. The slope of the Phillips curve may have changed.¹⁴ There is evidence that global inflationary cycles that correspond with intensifying globalization propagate common shocks via commodity, trade, and financial channels. Correlations of CPI are as elevated today as they were during the first oil shock, and on the surface we appear to be in the midst of a highly synchronized global rate cycle.

Global value chains will likely undergo a drastic transformation in the decade ahead. The change will be driven by a push for greater supply chain resilience due to the pandemic.

One aspect of a lack of resilience in the last few decades of globalization is that GVCs were highly vulnerable, having not been sufficiently diversified. Consequently, they are sensitive to interruptions caused by either a pandemic like this one or trade conflicts. Even prior to the COVID-19 pandemic, trade globalization was challenged by a rising wave of populism spurred on by economic discontent in Europe, the United States, Latin America, and elsewhere, and a trade war between the US and China. The recent backlash against trade globalization is not a new phenomenon, either. International trade increased rapidly after 1990, fueled by the growth of a complex network of GVCs. These chains represent the process of ever-finer specialization and geographic fragmentation of production. Kilic and Marin (2020) distinguish between local, regional (RVC), and global value chain (GVC) participation. Generally speaking, the higher the participation in intraregional RVCs, the higher the degree of regional economic integration. Likewise, the higher the degree of participation in interregional GVCs, the higher the degree of economic integration into the global economy.

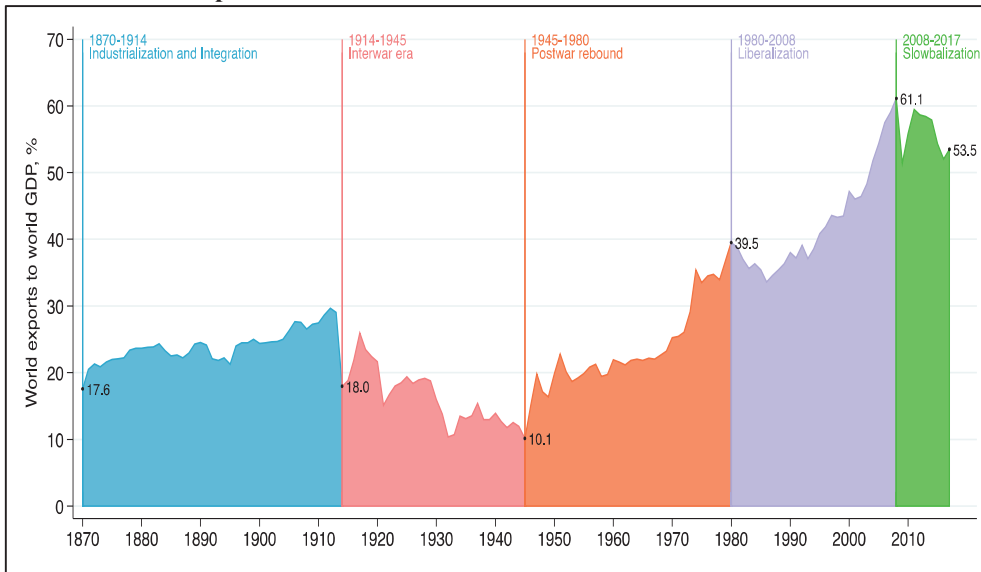
World trade, measured by the ratio of global exports to global GDP, is a proxy for economic integration. Figure 8 reveals five periods of modern globalization (see Irwin, 2013).

¹² See Carney (2017).

¹³ See Auer et al (2017).

¹⁴ See Razin (2018).

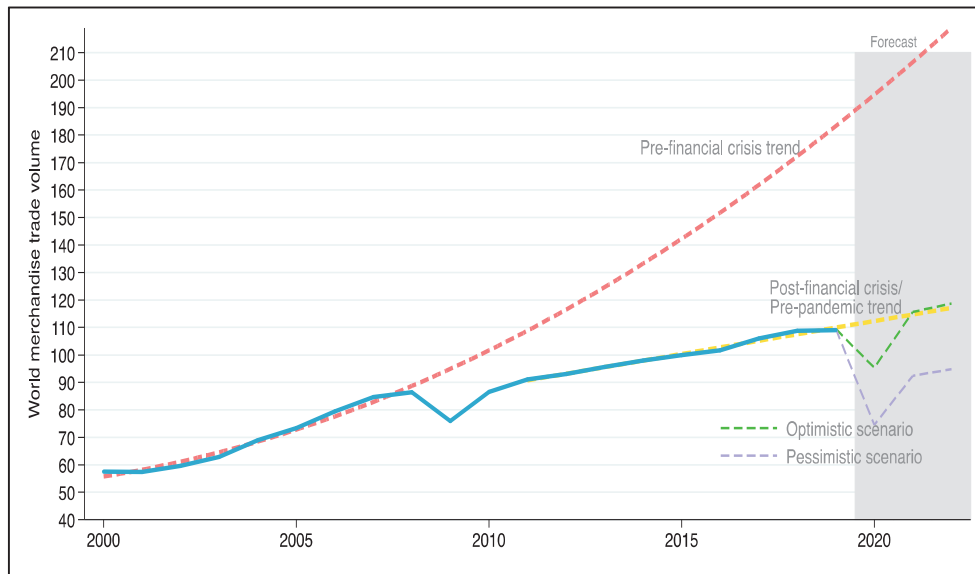
Figure 8
Ratio of Global Exports to Global GDP: 1870–2007



Source: Our World in Data, “Globalization over 5 centuries, World”.

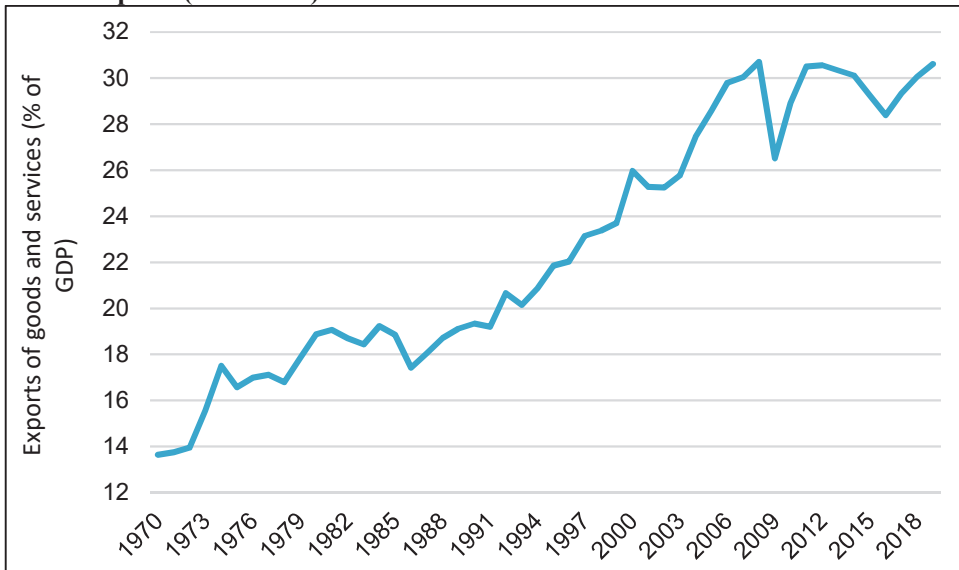
The pandemic is expected to add further momentum to the deglobalization trend. The forecasted diminished world trade in goods is shown in Figure 9a and 9b.

Figure 9a
Volume of World Merchandise Trade



Source: WTO, Merchandise export volume indices.

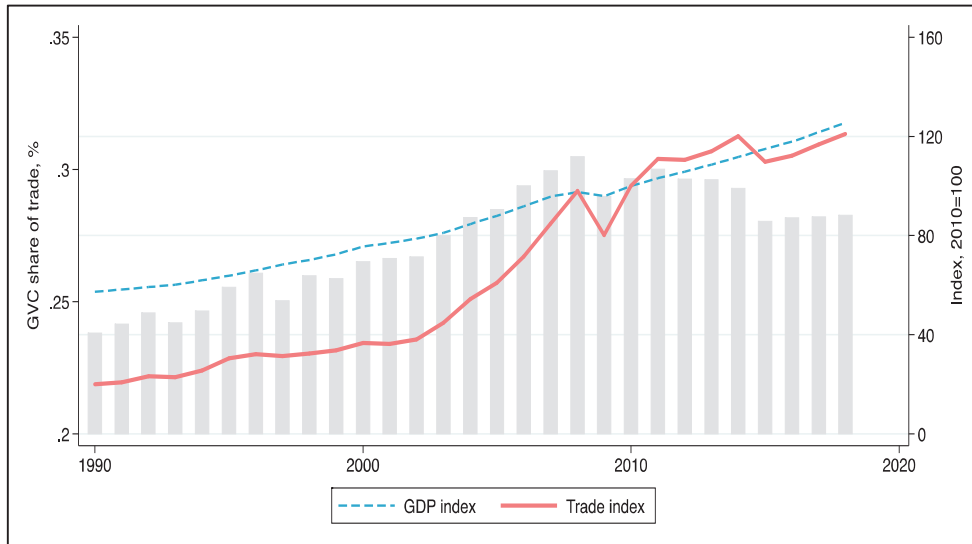
Figure 9b
World Exports (% of GDP)



Source: World Bank National Accounts data, and OECD National Accounts data files.

World Investment Report has monitored FDI and the activities of multinational enterprises for 30 years, during which time international production grew rapidly for two decades, followed by a decade of stagnation. Flows of cross-border investment in physical productive assets stopped growing in the 2010s, the growth of trade slowed down, and global value chain (GVC) trade declined (Figure 10).¹⁵

Figure 10
Global Value Chain



Source: The Eora Global Supply Chain Database, UNCTAD (2020) and the World Bank (2020). Trade is global exports of goods and services. GVC share of trade is proxied by the share of foreign value added in exports, based on the UNCTAD-Eora GVC database (Casella et al., 2019).

4. ISRAELI GLOBALIZATION

Israel has made remarkable economic achievements over its relatively short lifetime. It emerged in 1948 as a rather weak and impoverished agricultural economy. Over the past seven decades, though, the country has transformed itself into a strong and wealthy industrial economy, one that has become a world leader in many areas of technology, ranging from computers to medicine, as attested to by its membership in the Organization for Economic Cooperation and Development (OECD). Thanks in large part to its steadily advancing integration into the global economy, Israel has moved firmly out of the developing world and

¹⁵ See UNCTAD (2020).

into the developed world. At all stages of its development, globalization played a key role. Israel went through major trade liberalization, entering important FTAs in the 1970s and 1980s (with the EEC and United States, respectively), and a substantial cut of tariffs and removal of non-tariff barriers (NTBs) in the 1990s. These had important effects on income redistribution and probably contributed to Israel's orientation toward exports. More than two-thirds of Israel's trade in the early period was with the EU and the United States.

5. NEW EXPORT MARKETS

The global economy was jolted in the mid-1980s by China's and Vietnam's decision to abandon autarky in favor of export-led growth and to embrace "market communism." Socialist India and Muslim Indonesia liberalized and emulated their neighbors' trade participation strategy soon thereafter. Suddenly, and with little warning, more than a third of the world's population joined the globalization parade, which had a powerful impact on global demand, including in Israel.

China transforms

Liberalization, globalization, outsourcing, and technology transfer were the key drivers, not domestic rates of economic growth. China claimed double-digit GDP growth from 1950 to 1976 during the Maoist era, but its trade participation, outsourcing, and inbound foreign direct investment were negligible, as was its contribution to global economic vitality.

Beijing began distancing itself from autarky in the 1980s, when Deng Xiaoping introduced special economic zones (SEZ) in Shenzhen, Zhuhai, Shantou, and Xiamen, and designated the entire province of Hainan as a special economic zone. In 1984, China further opened fourteen coastal cities to overseas investment: Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang, and Beihai.

China leveraged the opportunities for outsourcing and technology transfer afforded by SEZs by liberalizing its domestic economy. This involved a rapid sequence of market-oriented reforms that circumvented communist ideological prohibitions against private ownership by allowing entrepreneurs and state companies to lease assets while preserving the party's monopoly on freehold property. The first reform, called *Gaige Kaifang* (literally, reforms and openness), lasted more than a decade, from 1976 until shortly after the Tiananmen Square massacre of June 4, 1989. The idea at its core was the gradual reversal of the three ideological pillars of the command economy: criminalization of private property, criminalization of private business, and criminalization of entrepreneurship.

The centerpiece of the post-Mao system was the "household responsibility system" of 1980, which allowed peasant family households to operate their plots independently of team and communal influences and made it possible for them to prosper by increasing productivity and selling above quota output in collective farm markets and household (cottage) industries.

The principle was soon thereafter applied nationwide. The household responsibility system was coupled with the “town village enterprise” (TVE) movement, an effort to transform the separate profit-seeking activities of individual households into a coordinated agro-industrial communal business. TVEs were flexible, and enjoyed considerable discretion in choosing and implementing agro-industrial activities. As time passed, many TVEs began operating as private enterprises, despite their cooperative form, and prospered in part due to the absence of freehold property-owning competitors and due to newly decentralized state finance.

The second phase of Deng Xiaoping’s march to partial consumer sovereign markets (as distinct from market-assisted command) can be conveniently dated at 1992, when he undertook his famous southern tour to Shenzhen. During the trip, Deng characterized China’s emerging productive order as a “socialist market economy,” and asserted that “if China does not practice socialism, does not carry on with ‘reform and opening’ and economic development, does not improve the people’s standard of living, then no matter what direction we go, it will be a dead end.” This clarion call to reinvigorate the marketization process in the aftermath of the Communist Party’s post-Tiananmen Square retrenchment was successful.

Deng’s team promptly transformed red directors into managers of market-competitive state-owned enterprises (SOEs), and then ultimately into managers of private companies, by expanding and codifying their powers in “The Regulations on Transforming the Management Mechanism of State-Owned Industrial Enterprises,” issued in July 1992. The document granted managers fourteen control rights over (1) production, (2) pricing, (3) sales, (4) procurement, (5) foreign trade, (6) investment, (7) use of retained funds, (8) disposal of assets, (9) mergers and acquisitions, (10) labor, (11) personnel management, (12) wages, (13) bonuses, and (14) internal organization, and refusal to pay unauthorized charges by the government.

These developments were accompanied by parallel stock market and banking reforms, allowing SOEs to increase equity (shares) sales to outsiders, and banks to tighten credit discipline over profligate SOEs. They also facilitated market-driven reshuffles of corporate structure through mergers and acquisitions. China joined the WTO in 2002. Vietnam followed a nearly identical path to liberalization and globalization under the banner of *doi moi* (renewal) and joined the WTO in 2007.

China is the only large economy that had positive GDP growth in 2020. Yet, despite being able to avoid a major recession, it was China’s slowest growth since 1976.¹⁶

¹⁶ Tang (2020) suggests various reasons for China’s relatively fast and solid rebound from the pandemic shock. The travel bans and city lockdowns seemed too draconian initially, but in retrospect appeared to be quite effective in reducing the spread of the virus and the chance of a second wave. China’s more effective testing and tracing of infected people through its mobile phone network contributed to its relative success in controlling the pandemic. China has more levers to increase GDP by increasing investment or by stocking up inventories of raw materials, which are mostly produced by the state-dominated upstream sectors.

India transforms

India and Indonesia were never communist states and did not have to undo the trammels of command economies, but both markets were severely over-controlled. While details of their liberalization and globalization differed, the thrust to *laissez-faire* was the same.

The reform process in India sought to accelerate economic growth and the eradication of poverty. The process of economic liberalization began in the late 1970s and picked up momentum in July 1991, with a systemic shift to a more open economy, greater reliance upon market forces, and a larger role for the private sector, including foreign investment. Subsequent reforms have gone a long way in decontrolling the domestic economy, emphasizing, like China, gradual transition rather than shock therapy.

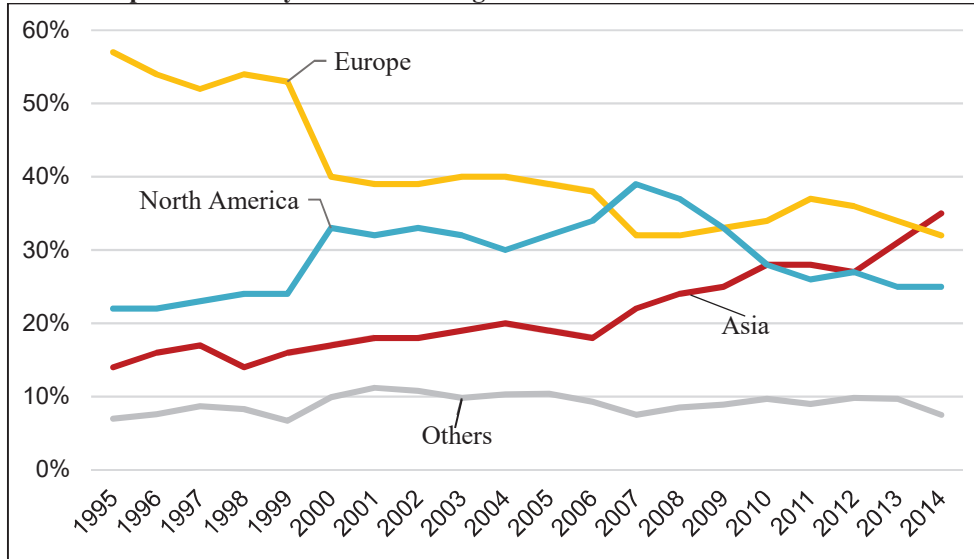
The changes initiated in 1991 eliminated the public sector's dominance of industrial activity, discretionary controls over private industrial investment, trade and exchange controls, tight restrictions on direct foreign investment, and the overregulation of the financial sector. The reforms unleashed powerful entrepreneurial forces. Since 1991, successive governments across political parties have successfully carried forward the country's economic reform agenda. Most of the central government's industrial controls were dismantled. There was massive deregulation of the industrial sector in order to bring in the element of competition and increase efficiency. The list of industries reserved solely for the public sector—which used to cover eighteen industries, including iron and steel, heavy machinery, telecommunications and telecom equipment, minerals, oil, mining, air transport services, and electricity generation and distribution—was drastically reduced to three.

Financial reforms that emphasized liberalization, including reforms to the interest rate and reserve requirements, have made India's financial industry globally competitive. The financial system has been deregulated and opened to international financial markets, and it employs derivatives and other modern innovations.

Export rerouting

Israel's exports to Asia grew substantially throughout the years, relative to all other export destinations. Figure 11 shows the share of Israel's exports by destination region.

Figure 11
Israel's Export Shares by Destination Region



Source: The Observatory of Economic Complexity, MIT

Recently, Israeli exports to Asia have surged, and they have stayed stable with the United States, but exports to most of Europe declined sharply. The “gravity” model helps explain these trends.¹⁷ In the gravity model, as the force between two objects in physics depends on the product of their masses and the distance between them, so trade between two countries is thought to depend on their economic mass (GDP) and all frictions affecting trade, including transport costs and policy variables. The theoretical and empirical foundations of the gravity model have been solidified in recent years by Eaton and Kortum (2002), Anderson and van Wincoop (2003), and Helpman, Melitz, and Rubinstein (2008). The shifts in trade between Israel and East Asia are likely to be a direct consequence of the policy transformations in China and India that can be captured via the gravity effect: their increasing economic “mass”

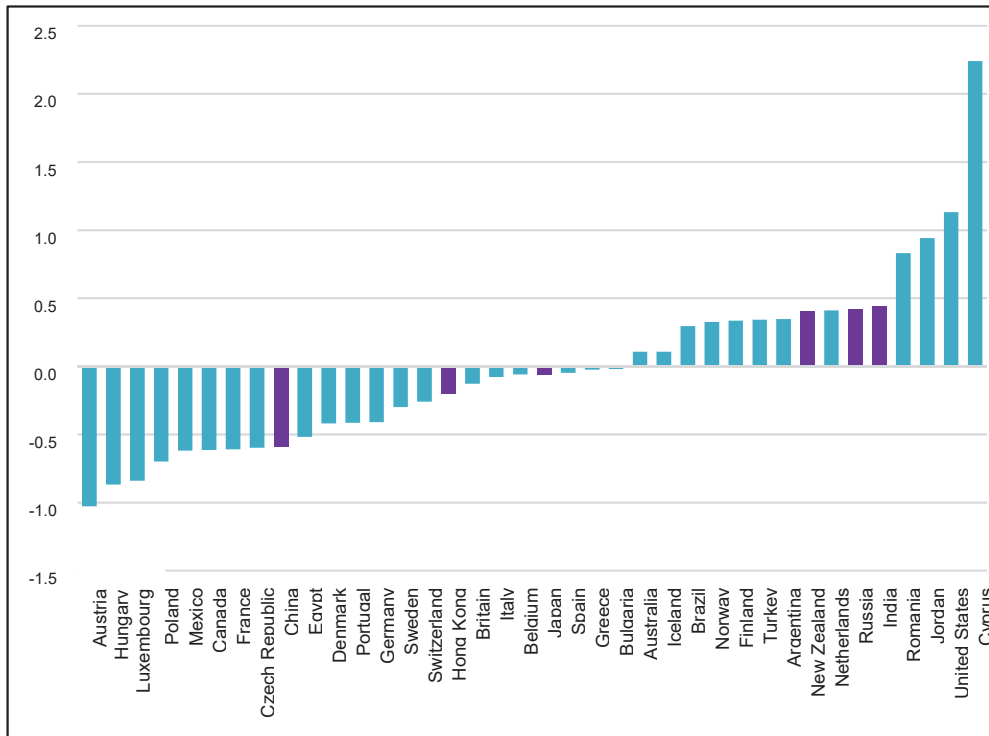
¹⁷ Germany also benefitted from China's integration into the global economic system, (especially in exports of cars and machinery). By 2008 Sino-German trade volume had reached 200 billion euros, and China was Germany's largest trading partner. German goods exports to China, as a percentage of total German exports, rose from 2 percent in 1995 to almost 8 percent in 2019.

(GDP) coupled with the tearing down of the border restrictions (as indicated above).

Mohar (2009) studied Israel's goods exports as a share of the total imports of the destination country, by using a nonstructural gravity model. The main explanatory variables in the destination country are GDP (representing market size), GDP per capita (representing the buying power of the average individual), distance, and a dummy variable representing whether or not there are trade agreements between Israel and the destination country. The sample period is 2001–08.

Figure 12 describes the excessive/deficient shares, above or below what is predicted by the gravity model. Exports to China are under-predicted, while exports to the United States are over-predicted. The gaps predominantly reflect missing variables such as lagged exports (the gravity model is static), measurement errors associated with the date and scope of bilateral trade agreements, and the heterogeneity of the goods composition of the destination-country's imports.

Figure 12
Differences between the Gravity Model Predictions and the Actual Share of Israeli Exports in Trading Partners' Imports*, percentages



* Countries without a trade agreement with Israel are emphasized.

Source: Mohar, BOI, 2009.

Summing up, the global economy has changed since China decided to abandon autarky in favor of export-led growth, India liberalized its trade, and both did away with the Arab League boycott on trade with Israel. Israel, like other export nations, is pivoting toward emerging markets in East Asia.¹⁸

The gravity models (pioneered by Tinbergen (1962)) have been integral in analyzing the determinants of bilateral trade. A nonstructural model applied to the trade between Israel, Europe, and the United States (Israel's traditional trading partners), as well as East Asia (Israel's emerging trading partner), indicates the importance of East Asia to the export-led growth of the Israeli economy. Furthermore, it guarantees a more sustainable growth in the decades to come.

6. TRADE GLOBALIZATION AND HIGH-TECH SURGE

Foreign direct investment (FDI) has been crucial for the emergence of Israel's high-tech sector into an elite position in the world economy. FDI refers to investments in companies and production outside the realm of the stock market. Whenever a foreign company buys an Israeli start-up, it is counted as FDI. Israel had the fourth highest level of foreign direct investment relative to the size of its economy, accounting for about 4 percent of its GDP in the 2010s. The OECD average was just 1.4 percent.¹⁹ The United States was the source of roughly 30 percent of global FDI outflows, followed by Japan, China, and Russia. For Israel, the OECD accounted for more than a quarter of FDI inflows, with most of it coming from the United States and the EU. More recently, China has become an important source of FDI inflows.

¹⁸ An insightful toy model for thinking about trade barriers is as follows: Assume two symmetric countries. Each country specializes in production. Goods enter symmetrically into utility, with elasticity of substitution σ (>1) between the goods. There is only one factor of production—labor. It takes α units of labor to produce one unit of either country's good; it takes τ units of labor to transport that good to the other country. Both countries impose ad valorem tariffs at rate t . Then the ratio of imports to consumption of home good exports as a

$$\text{share of GDP is } v/(1+v), \text{ where } v = (1 + \tau / \alpha)^{1-\sigma} (1 + t)^{-\sigma}$$

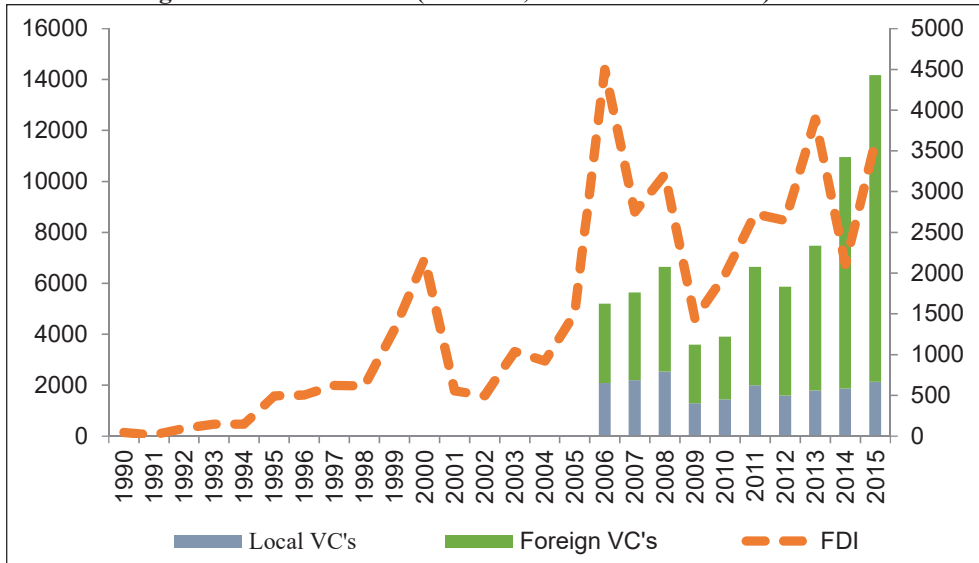
The shutting down of trade (or the imposition of a [partial] trade embargo) is equivalent to a rise in tariff, or an increase in transportation cost. In either case trade shrinks. Then, reversing the autarkic policies by opening up trade would boost trade. The increase in productivity $1/\alpha$ weakens trade. See Krugman (2016). The model, however, does not capture the forces that led to the rise of Israel's trade with China over time.

¹⁹ Israel fell short of only three countries in the OECD: Luxembourg brought in 39.5 percent of its GDP from FDI, followed by low-tax Ireland at 16.1 percent, and Chile at 7.4 percent.

Israel’s inward FDI flows accelerated in the 1990s and the 2000s (see Figure 13). Israel’s venture capital (data covers only the 2000s) has exhibited a remarkable increase as a proportion of total inward FDI, demonstrating the sharp increase in funding to high-tech startups.

However, the venture capital picture in Israel goes back to the early 1990s, with capital raised ebbing and flowing and with trends changing.

Figure 13
Israeli High-Tech Venture Capital Fund Raising (right scale, current US\$ million) and Inward Foreign Direct Investments (left scale, current US\$ million)

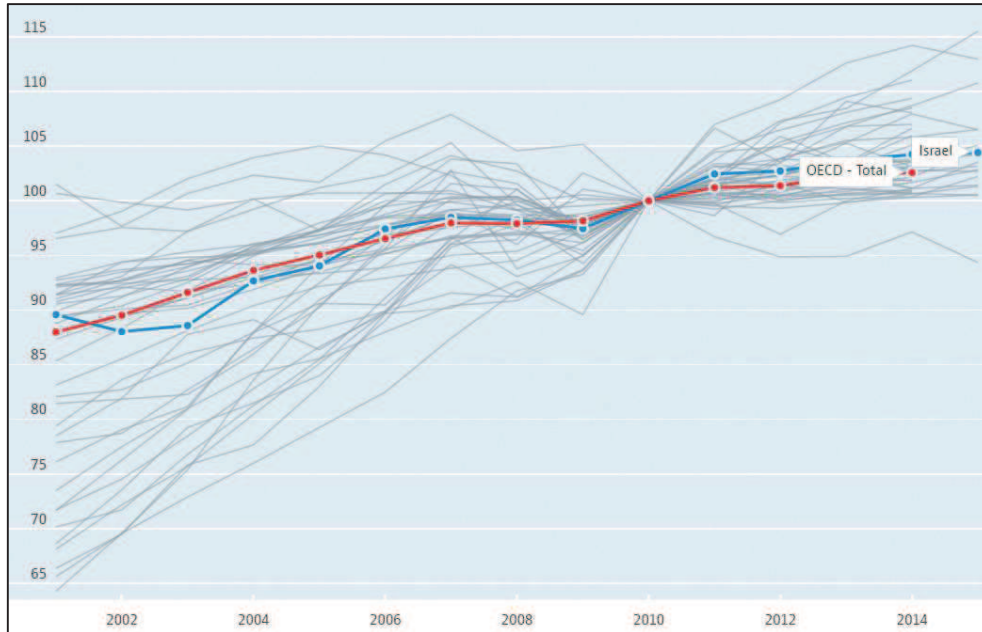


Source: IVC Research Center.

The dot-com bubble was a brief period of surging equity prices in the Internet sector and related businesses in 1997–2000. Firms discovered that they could increase share prices merely by adding the prefix e (e-Bay) or suffix .com (Amazon.com) to their corporate names. Purchasers of dot-com equities and derivatively hard assets gulled themselves into believing that normal standards of valuation could be set aside because dot-com ventures had unbounded profit horizons. The mania had a direct impact on all countries with significant high-tech sectors, including Israel. The dot-com bubble not only discounted the value of countries’ own capital stocks, it triggered large volumes of foreign direct investment (FDI) to other economies, including the emerging high-tech sector in Israel. This had a beneficial effect on national income both during the bubble and after it burst, and began a steady rise in inward FDI into Israel.

The relatively high spending on R&D has not fully manifested itself in productivity. However, as Figure 14 shows, labor productivity in Israel picked up moderately in the 2000s.

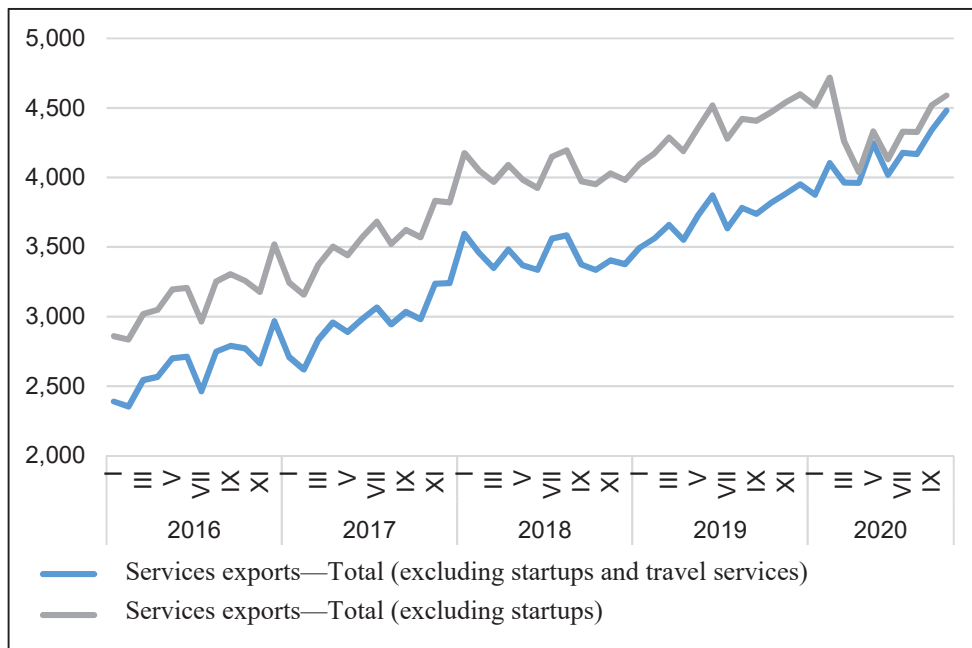
Figure 14
2000–15 GDP per hour work (constant 2010 prices)



Source: OECD Library.

Figure 15 shows that services exports, which are based on Israel's comparative advantage in services, are steadily rising. As for the short-term effects of the pandemic, the graph implies that, excluding tourism, services exports are unaffected.

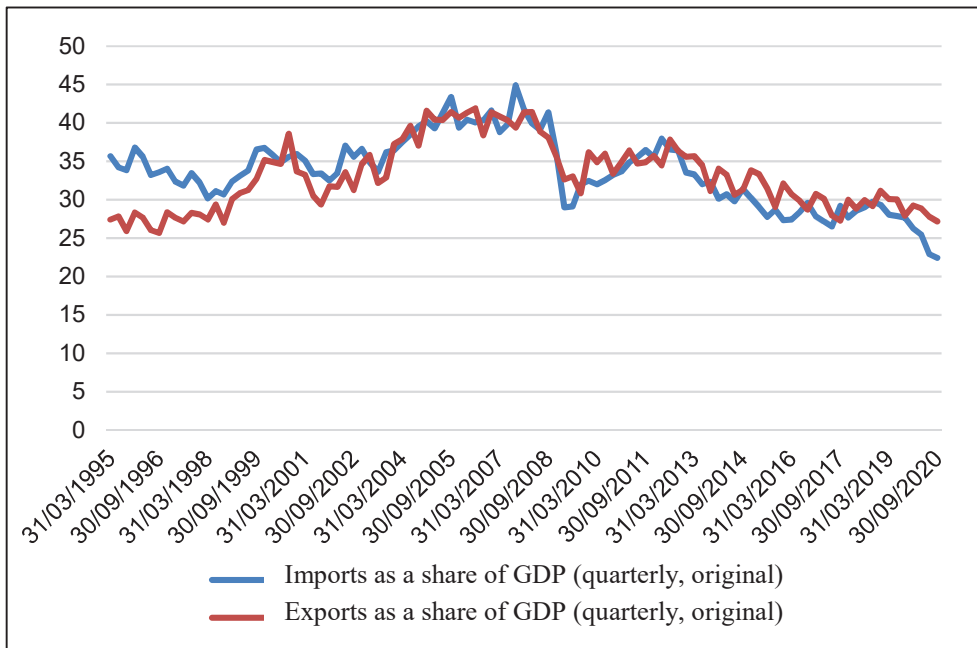
Figure 15
Israeli Services Exports (\$ million, seasonally adjusted)



Source: Bank of Israel data set.

Israel is a significant trade economy. Israel’s total exports as a share of GDP have been around 30 to 40 percent, similar to imports.

Figure 16
Israel's Total Exports and Imports, % of GDP, quarterly



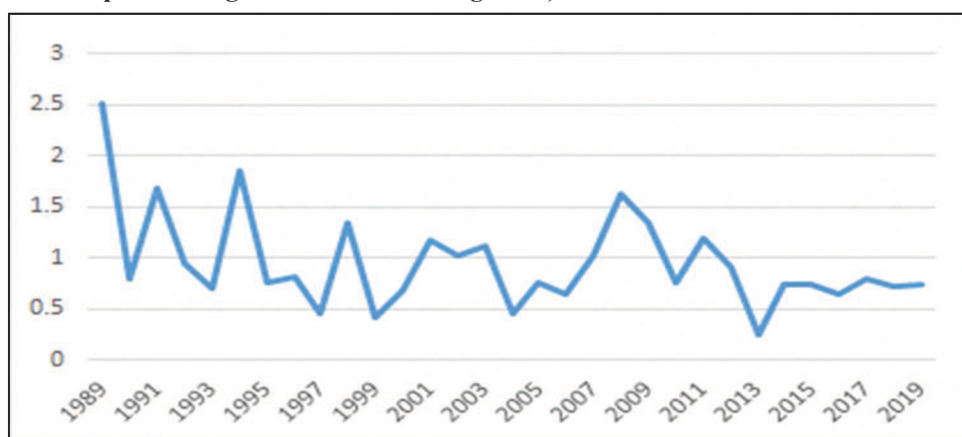
Source: Bank of Israel data set.

7. ISRAEL'S FINANCIAL GLOBALIZATION²⁰

International financial integration generates more synchronized country-specific yields. As stated above, deviations from equality of the real-interest-rate, adjusted for intertemporal changes of the real exchange rate, across economies using their own currency and having their special inflation processes, is a measure of financial integration into world markets. The real interest rate is measured by the yields on three-month government bonds. Here we examine the spread of the real interest rate between Israel and the US (adjusted for intertemporal changes in the real exchange rate).

²⁰ The globalization process that Israel has been involved in is covered in detail in Razin (2018).

Figure 17
Cross-Country Standard Deviation of the Real Interest Rate (adjusted for
intertemporal changes in the real exchange rate): Israel and the US



Source: Stats Bureau, FRED, World Bank, Real-exchange-rate adjusted, yields on three-month government bonds for Israel, and the yields on three-month US government bonds.

Figure 17 shows that, with the exception of the Global Financial Crisis, the Israel-US spread is trending downward. This indicates the steady integration of Israel's financial market into global financial markets, primarily that of the US.

8. CONCLUSION

This paper addresses strains posed by the COVID-19 pandemic. There is at least a temporary setback to globalization, and the cost of fighting the pandemic will strain the ability of governments to provide the welfare state in a style to which many of their citizens have become accustomed.

The COVID-19 pandemic has altered the interactions among globalization, migration, and redistribution policies. While the pandemic could strengthen nationalism and isolationism and accelerate the retreat from globalization, it may also spur a new wave of international cooperation in health, environment, and exchange of information, of the sort that emerged after World War II. The pandemic is driving the world economy to retreat from global economic integration. National security and public health concerns are providing new rationales for protectionism. The Great Recession of 2008–10 marked a historic turning point in the degree of global economic integration. In the post-pandemic era, policymakers appear poised to take deliberate steps to reinforce the movement toward de-globalization.²¹

²¹ See Razin (2021).

a. Global Pandemic Crisis: Implications for mobility

More broadly, the COVID-19 crisis changed migration patterns. Border closures, suspended asylum programs, interruptions in global transportation, and stay-at-home lockdowns have drastically curbed migration around the world, particularly from poorer nations to rich ones. Once exit strategies began to be implemented, pent-up demand has driven impatient people to start surging across borders again. However, social distancing and border restrictions in wealthy countries will likely remain long after the first COVID-19 infection wave subsides. The pandemic is likely to change the migration skill composition patterns as low-skilled workers typically face more social-distancing problems than high-skilled workers do. Autor (2020) points to key factors for the projected decline in demand for low-skilled workers in the post-COVID-19 era: the health risk in personal services, the acceleration of automation, the reallocation of sales toward large firms, and the likely shift in demand away from retail services. The impact on migrant-skill-composition of social distancing, matching technology, the expected arrival time of a vaccine, and testing with or without contact tracing are yet to be rigorously explored. In the post-COVID-19 era, firms have strong incentives to revise course and substitute GVCs with the adoption of robots. This shift could lower the demand for unskilled workers while increasing demand for high-skilled workers, thereby increasing wage gaps.

b. Global Pandemic Crisis: Long-term effects

The Global Pandemic Crisis was not caused by failures of the financial system as was the case regarding the GD and GFC. It was caused by the pandemic shock that required the lockdown of productive sectors of the economy. Although there may be an initial “catch-up” surge of consumer spending in advanced economies with the emergence of the vaccine, in the longer term, consumers are likely to save more. Thus, the worldwide savings-glut trend is reinforced. In addition to its direct impact on investment and hiring, the Global Pandemic Crisis, like the Great Recession, imposes longer-term productivity costs.

The literature points to several reasons for the long-term effects of the pandemic (Ilzetzki, 2021). First, supply chain disruptions can cause a decline in the economy’s productive capacity, but how persistent these are is still uncertain. Second, it may take time for new entrants to replace firms that failed due to the pandemic. Third, unemployment tends to be persistent, as workers’ skills deteriorate and their attachment to the labor force may weaken. Fatás and Summers (2017) give evidence of hysteresis effects of this sort. Fourth, corporate debt overhang may create ‘zombie firms’, which have lesser incentives to invest in productive capital. However, Jordá et al. (2020) find no historical support for post-crisis growth depending on corporate debt levels.

REFERENCES

- Anderson, James E. and Eric van Wincoop, (2003), "Gravity with Gravitas: A Solution to the Border Puzzle," *American Economic Review*, 93(1): 170–192.
- Antràs, Pol (2020). "De-Globalisation? Global Value Chains in the Post-COVID-19 Age". ECB Forum 2020.
- Auer, R., C. Borio, and A. Filardo (2017). "The Globalization of Inflation: The Growing Importance of Global Value Chains", BIS Working Papers.
- Baldwin, Richard, and Eiichi Tomiura (2020). "Thinking Ahead About the Trade Impact of COVID-19" *Economics in the Time of COVID-19*, 59–72.
- Bodnár, K., J. Le Roux, P. Lopez-Garcia, and B. Szörfi (2020). "The Impact of COVID-19 on Potential Output in the Euro Area", *ECB Economic Bulletin*.
- Bureau of Economic Analysis (2020). "US Gross Domestic Product". <https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=2>.
- Carney, M. (2015). "How is Inflation Affected by Globalisation?" WEF.
- Casella, B., R. Bolwijn, D. Moran, and K. Kanemoto (2019). "Improving the Analysis of Global Value Chains: The UNCTAD-Eora Database". *Transnational Corporations Journal*, 26(3): 115–142.
- Chetty, R., J. N. Friedman, N. Hendren, M. Stepner, and T. O. I. Team (2020). "How Did COVID-19 and Stabilization Policies Affect Spending and Employment? A New Real-Time Economic Tracker Based on Private Sector Data", Working Paper 27431, National Bureau of Economic Research.
- De-Grauwe, P. and Y. Ji (2020). "A Tale of Three Depressions," VoxEU & CEPR.
- Eichengreen, B. and K. O'Rourke (2010). "A Tale of Two Depressions: What do the New Data Tell Us?" February 2010 update. VoxEU & CEPR.
- Fatás, A. and L. H. Summers (2018). "The Permanent Effects of Fiscal Consolidations," *Journal of International Economics*, 112: 238–250.
- Guerrieri, V., G. Lorenzoni, L. Straub, and I. Werning (2020). "Macroeconomic Implications of COVID-19: Can Negative Supply Shocks Cause Demand Shortages?" Working Paper 26
- Ilzetzki, Ethan (2021), "Post-COVID-19 Potential Output in the Euro Area" VoxEU & CEPR, 02 January 2021
- Irwin, D. A. (1998). "The Smoot-Hawley Tariff: A Quantitative Assessment," *The Review of Economics and Statistics* 80(2): 326–334.
- Irwin, D. A. (2013), "The Nixon Shock After Forty Years: The Import Surcharge Revisited," *World Trade Review* 12(1): 29–56.
- Jordà, O., M. Kornejew, M. Schularick, and A. M. Taylor (2020), "Zombies at Large: Corporate Debt Overhang and the Macroeconomy," CEPR Discussion Paper 15518.
- Keynes, John Maynard (1919). *The Economic Consequences of the Peace* (1st edition). London: Macmillan & Co., Limited.

- Kilic, K. and D. Marin (2020, May). "How COVID-19 is Transforming the World Economy." VoxEU & CEPR.
- Kozlowski, Julian, Laura Veldkamp, and Venky Venkateswaran (2020). "Scarring Body and Mind: The Long-Term Belief-Scarring Effects of COVID-19," Forthcoming in the 2020 Jackson Hole Economic Policy Symposium Proceedings.
- Krugman, Paul (2016). *The Interwar Trade Decline* (princeton.edu), mimeo.
- Mohsin, Ali, Nafis Alam, and Syed Aun R. Rizvi (2020). "Coronavirus (COVID-19)–An Epidemic or Pandemic for Financial Markets", *Journal of Behavioral and Experimental Finance* 27: 100341.
- National Bureau of Statistics of China (2020). *Industrial Production Operation in August 2020*. http://www.stats.gov.cn/english/PressRelease/202009/t20200916_1789764.html.
- OECD (2020). *Oecd.stat*. <https://stats.oecd.org/>.
- Razin, Assaf (2014). *Understanding Global Crises: An Emerging Paradigm*, MIT Press.
- Razin, Assaf (2018). *Israel and the World Economy: The Power of Globalization*. Cambridge, MA: The MIT Press.
- Razin, Assaf (2021). *Globalization, Migration, and Welfare State: Understanding the Macroeconomic Trifecta*, Palgrave Macmillan.
- Razin, Assaf and Efraim Sadka (2021). "Migration and Redistribution: Federal Governance of an Economic Union Matters," *Journal of Government and Economics*, 1:100001
- Reinhart, C. M. and K. S. Rogoff (2014). "Recovery from Financial Crises: Evidence from 100 Episodes." Working Paper 19823, National Bureau of Economic Research.
- Rui, Esteves, and Nathan Sussman. "The COVID-19 and bond spreads." *The Economists' Voice*, 17(1): 20200013.
- UNCTAD (2020). *World Investment Report 2020: International Production Beyond the Pandemic*. New York and Geneva: United Nations: UNCTAD.
- World Bank (2020). *Global Economic Prospects*. <https://www.worldbank.org/en/publication/global-economic-prospects>.
- Zhan, J., R. Bolwijn, B. Casella, and A. U. Santos-Paulino (2020). "Global Value Chain Transformation to 2030: Overall Direction and Policy Implications". VoxEU & CEPR.